

GRADIENT SEQUENTIAL COMPRESSION SYSTEM FOR
PREVENTING DEEP VEIN THROMBOSIS

Abstract of the Disclosure

5 A gradient sequential compression system for
preventing deep vein thrombosis includes a pressure-
based system controller for controlling transfers of
air from a source of pressurized air to inflatable
chambers of a limb sleeve, so that a prophylactic
modality is provided to the limb. The controller also
includes a plurality of feeder valves pneumatically
connected to each of the chambers and a microprocessor-
10 based control unit for opening only one of the feeder
valves at a time during an inflation cycle, so that
each of the chambers can be independently inflated to
predetermined pressure levels. The control unit also
regulates the pressures in each of the chambers at the
15 respective pressure levels by repeatedly independently
measuring the pressures in the chambers and adjusting
the pressure levels upward or downward, if necessary.
The predetermined pressure levels can be default levels
or selected by a user or health care professional for a
20 particular application. In addition, the system
controller can be programmed into a variety of modes
for one or two-limb operation, for handling sleeves of
varying length, or for providing different pressure
cycles to the sleeves. The programming of the system
controller can either be performed manually by the user
through a display interface or by the use of a
universal connecting device that senses the mode of
operation associated with a sleeve connected thereto
and automatically configures the system controller.